



RAW SEQUENCE LASTING

PATENT APPLICATION: US/09/919,039

DATE: 09/09/2002 TIME: 11:51:53

572

- 3 <110> APPLICANT: Kaser, Matthew R.
- 5 <120> TITLE OF INVENTION: GENES EXPRESSED IN TREATED HUMAN C3A LIVER CELL CULTURES
- 7 <130> FILE REFERENCE: PA-0035 US
- C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/919,039
- C--> 10 <141> CURRENT FILING DATE: 2002-09-09
 - 12 <150> PRIOR APPLICATION NUMBER: 60/222,113
 - 13 <151> PRIOR FILING DATE: 2000-07-28
 - 15 <160> NUMBER OF SEQ ID NOS: 401
 - 16 <170> SOFTWARE: PERL Program
 - 18 <210> SEQ ID NO: 1
 - 19 <211> LENGTH: 572
 - 20 <212> TYPE: DNA
 - 21 <213> ORGANISM: Homo sapiens
 - 23 <220> FEATURE:
 - 24 <221> NAME/KEY: misc_feature
 - 25 <223> OTHER INFORMATION: Incyte ID No: 220060.4
 - 27 <400> SEQUENCE: 1
 - 28 atggcttctc atcgtctgct cctcctctgc cttgctggac tggtatttgt gtctgaggct 60
 - 29 ggccctacgg gcaccggtga atccaagtgt cctctgatgg tcaaagttct agatgctgtc 120
 - 30 cgaggcagtc ctgccatcaa tgtggccgtg catgtgttca gaaaggctgc tgatgacacc 180
 - 31 tgggagccat ttgcctctgg gaaaaccagt gagtctggag agctgcatgg gctcacaact 240
 - 32 gaggaggaat ttgtagaagg gatatacaaa gtggaaatag acaccaaatc ttactggaag 300
 - 33 gcacttggca tctccccatt ccatgagcat gcagaggtgg tattcacagc caacgactcc 360
 - 34 ggccccgcc gctacaccat tgccgccctg ctgagcccct actcctattc caccacggct 420
 - 35 gtcgtcacca atcccaagga atgaggagtg gacctgaagg acgagggatg ggatttcatg 480
 - 36 taaccaagag tattccattt ttagtaaagc actgttttca cctcatatgc tatgttagaa 540
 - 37 gtccaggcag agacaataaa acattcctgt ga
 - 39 <210> SEQ ID NO: 2
 - 40 <211> LENGTH: 263
 - 41 <212> TYPE: DNA
 - 42 <213> ORGANISM: Homo sapiens
 - 44 <220> FEATURE:
 - 45 <221> NAME/KEY: misc_feature
 - 46 <223> OTHER INFORMATION: Incyte ID No: 016238.1
 - 48 <220> FEATURE:
 - 49 <221> NAME/KEY: unsure
 - 50 <222> LOCATION: 22, 26, 42
 - 51 <223> OTHER INFORMATION: a, t, c, g, or other
 - 53 <400> SEQUENCE: 2
- W--> 54 gacatgatca gtgaattatg gntgantatg attatctttc tntttgtcct gttgaatact 60
 - 55 cattatgtgt aagagactgt gctaggcaat gtgaatgata ctaacatcaa caagatccaa 120
 - 56 tctttcaggg acgtgatgcc tttaaggatc tggcaagcta gtgatatgtg tcagaaatca 180
 - 57 aactaagaat tatctgatga atgttaactc tcctattgca ttagactatg aaaattatat 240

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/919,039

DATE: 09/09/2002 TIME: 11:51:53

Input Set : A:\pa0035us_seqlisting.txt
Output Set: N:\CRF4\09092002\I919039.raw

263 58 tccaaatctc aacagtttaa ttt 60 <210> SEQ ID NO: 3 61 <211> LENGTH: 212 62 <212> TYPE: DNA 63 <213> ORGANISM: Homo sapiens 65 <220> FEATURE: 66 <221> NAME/KEY: misc_feature 67 <223> OTHER INFORMATION: Incyte ID No: 1266683.1 69 <220> FEATURE: 70 <221> NAME/KEY: unsure 71 <222> LOCATION: 42, 161 72 <223> OTHER INFORMATION: a, t, c, g, or other 74 <400> SEQUENCE: 3 W--> 75 gtcgcgggcc gactggtgtt tatccgtcac tcgccgaggt tncttgggtc atggtgccag 60 76 cctgactgag aagaggacgc tcccgggaga cgaatgagga accacctcct cctactgttc 120 W--> 77 aagtacaggg gcctggtccg caaagggaag aaaagcaaaa nacgaaaatg gctaaattcg 180 212 78 tgatccgccc agccactgcc gccgactgca gt 80 <210> SEQ ID NO: 4 81 <211> LENGTH: 612 82 <212> TYPE: DNA 83 <213> ORGANISM: Homo sapiens 85 <220> FEATURE: 86 <221> NAME/KEY: misc_feature 87 <223> OTHER INFORMATION: Incyte ID No: 129384.1c 89 <220> FEATURE: 90 <221> NAME/KEY: unsure 91 <222> LOCATION: 482, 555 92 <223> OTHER INFORMATION: a, t, c, g, or other 94 <400> SEQUENCE: 4 95 tagggtaggg aaatataagg ggaaaaataa attaggctag attaaagctt tggctatttc 60 96 ctgcttttat acacagacgc ggctctcgcg acctcccctc cggggccccg ataaatacag 120 97 tatactgcga tttaaattaa gggcgcgggc ggagttagaa ggaccccagg agccgagagg 180 98 ctccacgaat aaataaaaac cgtaaaaaac caagcccgga gaaaggggaa agcggggtgg 240 99 ggcgcatcct tataggagag aagaggcgtg tagcgaataa agtgacagcc ccccaccctg 300 100 gacccgcagg ctcaggagtc cacgcgggga gaggggatgg agaactctcc tcgcttcgtc 360 101 ctctctcccg gggaatccct aaccccgcat gcgttacctg tcgctttggg gaggccgctg 420 102 ccgggatccg gccccgaaca gcccgggggg gcaggggcgg gggtcgtcga ggggatgggg 480 W--> 103 gnagagagca ggcggggc aggatgcccg gggtgagttg gcgagttccg gatcttcgct 540 W--> 104 cctctctccc ggggntcggg cgacgcagcc taccgggctg tcttcgccgc tcaccggaga 600 105 gggtcgtccg gg 107 <210> SEQ ID NO: 5 108 <211> LENGTH: 2536 109 <212> TYPE: DNA 110 <213> ORGANISM: Homo sapiens 112 <220> FEATURE: 113 <221> NAME/KEY: misc_feature 114 <223> OTHER INFORMATION: Incyte ID No: 3201389CB1 116 <400> SEQUENCE: 5 117 cggctgatct tttggtttga gggagagact ggcgctggag ttttgaattc cgaatcatgt 60

TIME: 11:51:53

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/919,039

```
118 gcagaatgct gaatcttccc ccagccagga cgaataagac agcgcggaaa agcagattct 120
119 cgtaattctg gaattgcatg ttgcaaggag tctcctggat cttcgcaccc agcttcgggt 180
120 agggagggag tccgggtccc gggctaggcc agcccggcag gtggagaggg tccccggcag 240
121 ccccgcgcgc ccctggccat gtctttaatg ccctgcccct tcatgtggcc ttctgagggt 300
122 toccaggget ggccagggtt gtttcccacc cgcgcgcgcg ctctcacccc cagccaaacc 360
123 cacctggcag ggctccctcc agccgagacc ttttgattcc cggctcccgc gctcccgcct 420
124 ccgcgccagc ccgggaggtg gccctggaca gccggacctc gcccggcccc ggctgggacc 480
125 atggtgtttc tctcgggaaa tgcttccgac agctccaact gcacccaacc gccggcaccg 540
126 gtgaacattt ccaaggccat tctgctcggg gtgatcttgg ggggcctcat tcttttcggg 600
127 gtgctgggta acatcctagt gatcctctcc gtagcctgtc accgacacct gcactcagtc 660
128 acgcactact acategteaa eetggeggtg geegacetee tgeteacete caeggtgetg 720
129 coetteteeg ceatettega ggteetagge tactgggeet teggeagggt ettetgeaac 780
130 atctgggcgg cagtggatgt gctgtgctgc accgcgtcca tcatgggcct ctgcatcatc 840
131 tocatogaco gotacatogg ogtgagotac cogotgogot accoaacoat ogtcacocag 900
132 aggaggggtc tcatggctct gctctgcgtc tgggcactct ccctggtcat atccattgga 960
133 cccctgttcg gctggaggca gccggccccc gaggacgaga ccatctgcca gatcaacgag 1020
134 gagccgggct acgtgctctt ctcagcgctg ggctccttct acctgcctct ggccatcatc 1080
135 ctggtcatgt actgccgcgt ctacgtggtg gccaagaggg agagccgggg cctcaagtct 1140
136 ggcctcaaga ccgacaagtc ggactcggag caagtgacgc tccgcatcca tcggaaaaac 1200
137 gccccggcag gaggcagcgg gatggccagc gccaagacca agacgcactt ctcagtgagg 1260
138 ctcctcaagt tctcccggga gaagaaagcg gccaaaacgc tgggcatcgt ggtcggctgc 1320
139 ttcgtcctct gctggctgcc ttttttctta gtcatgccca ttgggtcttt cttccctgat 1380
140 ttcaagccct ctgaaacagt ttttaaaata gtattttggc tcggatatct aaacagctgc 1440
141 atcaacccca tcatataccc atgctccagc caagagttca aaaaggcctt tcagaatgtc 1500
142 ttgagaatcc agtgtctccg cagaaagcag tcttccaaac atgccctggg ctacaccctg 1560
143 caccegecca gecaggeegt ggaagggeaa cacaaggaea tggtgegeat eeeegtggga 1620
144 tcaagagaga ccttctacag gatctccaag acggatggcg tttgtgaatg gaaatttttc 1680
145 tettecatge eccettgate teccaggatt acagteteca aagaccaate etcetetace 1740
146 acageceggg gacacacac catgacatga agecagette cegtecacga etgttgteet 1800
147 tactgcccaa ggaaggggag catgaaaccc accactggtc ctgcgaccca ctgtctttgg 1860
148 aatccaccc aggagcccag gagccttgcc tgacacttgg atttacttct ttatcaagca 1920
149 tccatctgac taaggcacaa atccaacatg ttactgttac tgatacagga aaaacagtaa 1980
150 cttaaggaat gatcatgaat gcaaagggaa agaggaaaag agccttcagg gacaaatagc 2040
151 tcgatttttt gtaaatcagt ttcatacaac ctccctcccc catttcattc ttaaaagtta 2100
152 attgagaatc atcagccacg tgtagggtgt gaggaattcc ataaggcacc ccagtttctt 2160
153 caataagtaa atggcatttt taaaagggga acttttatgg gttaaaatat tcttaagaga 2220
154 tgtattcatc aagtatactg tacaagcctt gttcatttag attgaaacaa agtgtaaaaa 2280
155 gacatttttg aagtaattgg agaaaattaa gcataggctg tgtcctatta gatgttagat 2340
156 aattagatcg ttattttaaa ttttgttgga tgtgataatg gcattgtcct taactggtaa 2400
157 gtgcatatcg aagtatgttt gcaatttgct ttaaagtttt attgccaaaa gtggggaagc 2460
158 aagtgtgata gatgaaataa gaatggcagg caaggtcaca tgccgtactt ccatgtctgt 2520
                                                                       2536
 159 gcaatgttga aattta
 161 <210> SEQ ID NO: 6
 162 <211> LENGTH: 429
 163 <212> TYPE: PRT
 164 <213> ORGANISM: Homo sapiens
 166 <220> FEATURE:
 167 <221> NAME/KEY: misc_feature
 168 <223> OTHER INFORMATION: Incyte ID No: 3201389CD1
```

RAW SEQUENCE LISTING DATE: 09/09/2002 PATENT APPLICATION: US/09/919,039 TIME: 11:51:53

170	<400> SEQUENCE:				6										
171	Met	Val	Phe	Leu	Ser	Gly	Asn	Ala	Ser	Asp	Ser	Ser	Asn	Cys	Thr
172	1				5					10					15
	Gln	Pro	Pro	Ala		Val	Asn	Ile	Ser		Ala	Ile	Leu	Leu	
174					20	_		_	_,	25	1		a 1	•	30
	Val	Ile	Leu	Gly		Leu	Ile	Leu	Phe		vaı	ьeu	GIY	Asn	_
176	_	1		-	35	777		G	772	40	774 ~	т	111.0	C 0 7	45
177	Leu	val	Ile	ьeu		vaı	Ala	Cys	HIS	55	HIS	ьeu	птъ	Ser	60
178 179	mb w	uio	Tyr	Птег	50	17 a 1	λαη	Lau	λla		λ] =	Aen	T.e.11	T.e.11	
180	TIII	птэ	тут	T X T	65	val	ASII	БСи	AIG	70	niu	nop.	шец	Lou	75
181	Thr	Ser	Thr	Val		Pro	Phe	Ser	Ala		Phe	Glu	Val	Leu	
182	T * * * *	DCI		, 41	80					85					90
	Tvr	Trp	Ala	Phe		Arq	Val	Phe	Cys	Asn	Ile	Trp	Ala	Ala	Val
184	-1-	1			95	_			_	100		_			105
	Asp	Val	Leu	Cys	Cys	Thr	Ala	Ser	Ile	Met	Gly	Leu	Cys	Ile	Ile
186	_			-	110					115					120
187	Ser	Ile	Asp	Arg	Tyr	Ile	Gly	Val	Ser	Tyr	Pro	Leu	Arg	\mathtt{Tyr}	Pro
188					125					130					135
189	Thr	Ile	Val	Thr	Gln	Arg	Arg	Gly	Leu		Ala	Leu	Leu	Cys	
190					140			•		145					150
	Trp	Ala	Leu	Ser		Val	Ile	Ser	Ile		Pro	Leu	Phe	GTA	
192			_		155		_	~ 3		160	G	~1	-1 -	3	165
	Arg	Gln	Pro	Ala		Glu	Asp	GIU	Thr	175	Cys	Gin	ire	ASI	180
194	C1	Dwa	Gly	Mara	170	T 011	Dho	Car	בות		Glw	Ser	Dhe	ጥህዮ	
195	GIU	Pro	GIY	туг	185	Leu	Pne	261	Ата	190	GIY	261	FIIC	1 Y 1	195
	Dro	T.011	Ala	Tle		T.e.11	Val	Met	Tvr		Ara	Val	Tvr	Val	
198	rio	пси	Ala	110	200	пса	· u ·	1100	-1-	205	9		-1-		210
	Ala	Lvs	Arg	Glu		Arq	Gly	Leu	Lys		Gly	Leu	Lys	Thr	Asp
200			,		215		-		-	220	_		_		225
	Lys	Ser	Asp	Ser	Glu	Gln	Val	Thr	Leu	Arg	Ile	His	Arg	Lys	Asn
202	_				230					235					240
203	Ala	Pro	Ala	Gly	Gly	Ser	Gly	Met	Ala	Ser	Ala	Lys	Thr	Lys	Thr
204					245					250					255
205	His	Phe	Ser	Val		Leu	Leu	Lys	Phe		Arg	Glu	Lys	Lys	
206	_			_	260					265	-1.	77 - 7	.		270
	Ala	Lys	Thr	Leu		IIe	Val	Val	GIY		Pne	vaı	ьeu	Cys	
208	_	~	D1	D1	275	*** 1	16- de	D	T1.	280	Com	Dho	Dho	Dro	285
		Pro	Phe	Pne	290		Met	PIO	ire	295		Pile	FIIC	FIO	300
210		Tvc	Pro	Car			V = 1	Dhe	T.vc			Phe	Tro	T.eu	
212		цуъ	FIO	361	305		Val	riic	пуз	310		1 110		Lou	315
		T.e.u	Asn	Ser			Asn	Pro	Tle			Pro	Cvs	Ser	
214	_	Lou	11011	001	320					325			- 4 -		330
		Glu	Phe	Lys			Phe	Gln	Asn			Arg	Ile	Gln	
216			_	-	335					340		_			345
		Arg	Arg	Lys	Gln	Ser	Ser	Lys	His	Ala	Leu	Gly	Tyr	Thr	Leu
218		_	_		350					355					360

RAW SEQUENCE LISTING DATE: 09/09/2002 PATENT APPLICATION: US/09/919,039 TIME: 11:51:53

```
219 His Pro Pro Ser Gln Ala Val Glu Gly Gln His Lys Asp Met Val
                                         370
                                                             375
220
                    365
221 Arg Ile Pro Val Gly Ser Arg Glu Thr Phe Tyr Arg Ile Ser Lys
                                         385
                    380
222
223 Thr Asp Gly Val Cys Glu Trp Lys Phe Phe Ser Ser Met Pro Arg
                    395
224
225 Gly Ser Ala Arg Ile Thr Val Ser Lys Asp Gln Ser Ser Cys Thr
                    410
226
227 Thr Ala Arg Gly His Thr Pro Met Thr
                    425
228
229 <210> SEQ ID NO: 7
230 <211> LENGTH: 624
231 <212> TYPE: DNA
232 <213> ORGANISM: Homo sapiens
234 <220> FEATURE:
235 <221> NAME/KEY: misc_feature
236 <223> OTHER INFORMATION: Incyte ID No: 086390CB1
238 <400> SEQUENCE: 7
239 tatageteca eggecagaag ataceageag etetgeettt aetgaaattt eagetggaga 60
240 aaggtccaca gcacaatgag gcttttcaca ggcattgttt tctgctcctt ggtcatggga 120
241 gtcaccagtg aaagctggcg ttcgtttttc aaggaggctc tccaaggggt tggggacatg 180
242 ggcagagcct attgggacat aatgatatcc aatcaccaaa attcaaacag atatctctat 240
243 gctcggggaa actatgatgc tgcccaaaga ggacctgggg gtgtctgggc tgctaaactc 300
244 atcagccgtt ccagggtcta tcttcaggga ttaatagact actatttatt tggaaacagc 360
245 agcactgtat tggaggactc gaagtccaac gagaaagctg aggaatgggg ccggagtggc 420
246 aaagaccccg accgcttcag acctgacggc ctgcctaaga aatactgagc ttcctgctcc 480
247 tetgetetea gggaaactgg getgtgagee acacacttet eececcagae agggaeacag 540
248 ggtcactgag ctttgtgtcc ccaggaactg gtatagggca cctagaggtg ttcaataaat 600
                                                                        624
249 gtttgtcaaa ttgaaaaaaa aaaa
251 <210> SEQ ID NO: 8
252 <211> LENGTH: 130
253 <212> TYPE: PRT
254 <213> ORGANISM: Homo sapiens
256 <220> FEATURE:
257 <221> NAME/KEY: misc_feature
258 <223> OTHER INFORMATION: Incyte ID No: 086390CD1
260 <400> SEQUENCE: 8
261 Met Arg Leu Phe Thr Gly Ile Val Phe Cys Ser Leu Val Met Gly
                                          10
263 Val Thr Ser Glu Ser Trp Arg Ser Phe Phe Lys Glu Ala Leu Gln
                                                               30
                                          25
                      20
264
265 Gly Val Gly Asp Met Gly Arg Ala Tyr Trp Asp Ile Met Ile Ser
                      35
                                          40
266
267 Asn His Gln Asn Ser Asn Arg Tyr Leu Tyr Ala Arg Gly Asn Tyr
                      50
268
269 Asp Ala Ala Gln Arg Gly Pro Gly Gly Val Trp Ala Ala Lys Leu
                                          70
                      65
271 Ile Ser Arg Ser Arg Val Tyr Leu Gln Gly Leu Ile Asp Tyr Tyr
                                                               90
                                          85
272
```

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/919,039

DATE: 09/09/2002 TIME: 11:51:54

Input Set : A:\pa0035us_seqlisting.txt
Output Set: N:\CRF4\09092002\I919039.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:2; N Pos. 22,26,42
Seq#:3; N Pos. 42,161
Seq#:4; N Pos. 482,555
Seq#:22; N Pos. 3750,3751,3752,3753,3754,3755,3756,3757,3758,3759,3760,3761
Seq#:22; N Pos. 3762,3763,3764,3765,3766,3767,3768,3769,3770,3771,3772,3773
Seq#:22; N Pos. 3774,3775,3776,3777,3778,3779,3780,3781,3782,3783,3784,3785
Seq#:22; N Pos. 3786,3787,3788,3789,3790,3791,3792,3793,3794,3795,3796,3797
Seq#:22; N Pos. 3798,3799,3800,3801,3802,3803,3804,3805,3806,3807,3808,3809
Seq#:22; N Pos. 3810,3811,3812,3813,3814,3815,3816,3817,3818,3819,3820,3821
Seq#:22; N Pos. 3822,3823,3824,3825,3826,3827,3828,3829,3830,3831,3832,3833
Seq#:22; N Pos. 3834,3835,3836,3837,3838,3839,3840,3841,3842,3843,3844,3845
Seq#:22; N Pos. 3846,3847,3848,3849,3850,3851,3852,3853,3854,3855,3856,3857
Seq#:22; N Pos. 3858,3859,3860,3861,3862,3863,3864,3865,3866,3867,3868,3869
Seq#:22; N Pos. 3870,3871,3872,3873,3874,3875,3876,3877,3878,3879,3880,3881
Seq#:22; N Pos. 3882,3883,3884,3885,3886,3887,3888,3889,3890,3891,3892,3893
Seq#:22; N Pos. 3894,3895,3896,3897,3898,3899,3900,3901,3902,3903,3904,3905
Seq#:22; N Pos. 3906,3907,3908,3909,3910,3911,3912,3913,3914,3915
Seq#:37; N Pos. 33,483,500
Seq#:45; N Pos. 905
Seg#:51; N Pos. 44,57
Seq#:55; N Pos. 574,575,576,577,578,579,580,581,582,583,584,585,586,587,588
Seq#:55; N Pos. 589,590,591,592,593,594,595,596,597,598,599,600,601,602,603
Seq#:55; N Pos. 604,605,606,607,608,609,610,611,612,613,614,615,616,617,618
Seq#:55; N Pos. 619,620,621,622,623,624,625,626,627,628,629,630,631,632,633
Seq#:55; N Pos. 634,635,636,637,638,639,640,641,642,643,644,645,646,647,648
Seq#:55; N Pos. 649,650,651,652,653,654,655,656,657,658,659,660,661,662,749
Seq#:55; N Pos. 750,751,752,753,754,755,756,757,758,759,760,761,762,763,764
Seq#:55; N Pos. 765,766,767,768,769,770,771,772,773,774,775,776,777,778,779
Seq#:55; N Pos. 780,781,782,783,784,785,786,787,788,789,790,791,792,793,794
Seq#:55; N Pos. 795,796,797,798,799,800,801,802,803,804,805,806,807,808,809
Seq#:55; N Pos. 810,811,812,813,814,815,816,817,818,819,820,821,822,823,824
Seq#:55; N Pos. 825,826,827,828,829,830
Seq#:56; N Pos. 5,45,49,127,133,159
Seq#:60; N Pos. 2851
Seq#:70; N Pos. 4537,4540,4590,5133
Seq#:74; N Pos. 3786,3788,3791
Seq#:80; N Pos. 343,344,345,346,347,348,349,350,351,352,353,354,355,356,357
Seq#:80; N Pos. 358,359,360,361,362,363,364,365,366,367,368,369,370,371,372
Seq#:80; N Pos. 373,374,375,376,377,378,379,380,381,382,383,384,385
Seq#:82; N Pos. 15,19,40,48,55,56,85,86,88,89,90,91,92,93,94,95,96,97,98,99
Seq#:82; N Pos. 100,101,102,103,104,105,106,107,108,109,110,111,112,113,114
Seq#:82; N Pos. 115,116,117,118,119,120,121,122,123,124,125,126,127,128,129
Seq#:82; N Pos. 130,131,132,133,134,135,136,137,138,139,140,141,142,143,144
Seq#:82; N Pos. 145,146,147,148,149,150,151,152,153,154,155,156,157,158,159
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/09/2002 PATENT APPLICATION: US/09/919,039 TIME: 11:51:54

```
Seq#:82; N Pos. 160,161,162,163,164,165,166,167,168,169,170,171,172,173,174
Seq#:82; N Pos. 175,176,177,178,179,180,181,182,183,184,185,186,187,188,189
Seq#:82; N Pos. 190,191,192,193,194,195,196,197,198,199,200,201,202,203,204
Seq#:82; N Pos. 205,206,207,208,209,210,211,212,213,214,215,216,217,218,219
Seq#:82; N Pos. 220,221,222,223,224,225,226,227,228,229,230,231,232,233,234
Seq#:82; N Pos. 235,236,237,238,239,240,241,242,243,244,245,246,247,248,249
Seq#:82; N Pos. 250,251,252,253,254,255,256,257,258,259,260,261,262,263,264
Seq#:82; N Pos. 265,266,267,268,269,270,271,272,273,274,275,276,277,278,279
Seq#:82; N Pos. 280,281,282,283,284,285,286,287,288,289,290,291,292,293,294
Seq#:82; N Pos. 295,296,297,298,299,859,861,863,866,872,874,875,877,879,880
Seq#:82; N Pos. 881,890,906,907
Seq#:89; N Pos. 32,361,1085,1180,1183,1191,1207,1234,1247,1275,1319,1327
Seq#:89; N Pos. 1328,1332,1336,1338,1343,1345,1351,1353,1362,1363,1366,1368
Seq#:89; N Pos. 1376,1377,1378,1380,1383,1384,1388,1396,1398,1399,1402,1411
Seq#:89; N Pos. 1412,1413
Seq#:90; N Pos. 519,520,521,522,523,524,525,526,527,528,529,530,531,532,533
Seq#:90; N Pos. 534,535,536,537,538,539,540,541,542,543,544,545,546,547,548
Seq#:90; N Pos. 549,550,551,552,553,554,555,556,557,558,559,560,561,562,563
Seq#:90; N Pos. 564,565,566,567,568,569,570,571,572,573,574,575,576,577,578
Seq#:90; N Pos. 579,580,581,582,583,584,585,586,587,588,589,590,591,592,593
Seq#:90; N Pos. 594,595,596,597,598,599,600,601,602,603,604,605,606,607,608
Seq#:90; N Pos. 609,610,611,612,613,614,615,616,774,775,776,777,778,779,780
Seq#:90; N Pos. 781,782,783,784,785,786,787,788,789,790,791,792,793,794,795
Seq#:90; N Pos. 796,797,798,799,800,801,802,803,804,805,806,807,808,809,810
Seq#:90; N Pos. 811,812,813,814,815,816,817,818,819,820,821,822,823,824,825
Seq#:90; N Pos. 826,827,828,829,830,831,832,833,834,835,836,837,838,839,840
Seq#:90; N Pos. 841,842,843,844,845,846,847,848,849,850,851,852,853,854,855
Seq#:90; N Pos. 856,857,858,859,860,861,862,863,864,865,866,867,868,869,870
Seq#:90; N Pos. 871,872,873,874,875,876,877,878,879,880,881,882,883,884,885
Seq#:90; N Pos. 886,887,888,889,890,891,892,893,894,895,896,897,898,899,900
Seq#:90; N Pos. 901,902,903,904,905,906,907,908,909,910,911,912,913,914,915
Seq#:90; N Pos. 916,917,918,919,920,921,922,923,924,925,926,927,928,929,930
Seq#:90; N Pos. 931,932,933,934,935,936,937,938,939,940,941,942,943,944,945
Seq#:90; N Pos. 946,947,948,949,950,951,952,953,954,955,956,957,958,959,960
Seg#:90; N Pos. 961,962,963
Seq#:91; N Pos. 739
Seq#:97; N Pos. 502,503,504,505,506,507,508,509,510,511,512,513,514,515,516
Seq#:97; N Pos. 517,518,519,520,521,522,523,524,525,526,527,528,529,530,531
Seq#:97; N Pos. 532,533,534,535,536,537,538,539,540,541,542,543,544,545,546
Seq#:97; N Pos. 605,606,607,608,609,610,611,612,613,614,615,616,617,618,619
Seq#:97; N Pos. 620,621,622,623,624,625,626,627,628,629,630,631,632,633,634
Seq#:97; N Pos. 635,636,637,638,639,640,641,642,643,644,645,646,647,648,649
Seq#:97; N Pos. 650,651,652,653,654,655,656,657,658,659,660,661
Seq#:98; N Pos. 104,2838
Seq#:100; N Pos. 865,881,888,889,897,1850,3016
Seq#:110; N Pos. 867
Seq#:111; N Pos. 128,131,141,142,143,144,145,146,147,148,149,150,151,152
Seq#:111; N Pos. 153,154,155,156,157,158,159,160,910,923,924,925,926,927
Seq#:111; N Pos. 928,929,930,931,932,933,934,935,936,937,938,939,940,941
```

TIME: 11:51:54

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/919,039

```
Seq#:111; N Pos. 942,943,944,945,946,947
Seq#:136; N Pos. 32,34,40,58,91,110,120,123,125,144,150
Seq#:147; N Pos. 2626,3304,3305,3306,3307,3308,3309,3310,3311,3312,3313
Seq#:147; N Pos. 3314,3315,3316,3317,3318,3319,3320,3321,3322,3323,3324
Seq#:147; N Pos. 3325,3326,3327,3328,3329,3330,3331,3332,3333,3334,3335
Seg#:147; N Pos. 3336,3337,3338,3339,3340,3341,3342,3343,3344,3345,3346
Seq#:147; N Pos. 3347,3348,3349,3350,3351,3352,3353,3354,3355,3356,3357
Seq#:147; N Pos. 3358,3359,3360,3361,3362,3363,3364,3365,3366,3367,3368
Seq#:147; N Pos. 3369,3370,3371,3372,3373,3374,3375,3376,3377,3378,3379
Seq#:147; N Pos. 3380,3381,3382,3383,3384,3385,3386,3387,3388,3389,3390
Seq#:147; N Pos. 3391,3392,3393,3394,3395,3396,3397,3398,3399,3400,3401
Seq#:147; N Pos. 3402,3403,3404,3405,3406,3407,3408,3409,3410,3411,3412
Seq#:147; N Pos. 3413,3414,3415,3416,3417,3418,3419,3420,3421,3422,3423
Seq#:147; N Pos. 3424,3425,3426,3427,3428,3429,3430,3431,3432,3433,3434
Seq#:147; N Pos. 3435,3436,3437,3438,3439,3440,3441,3442,3443,3444,3445
Seq#:147; N Pos. 3446,3447,3448,3449,3450,3451,3452,3453,3454,3455,3456
Seq#:147; N Pos. 3457,3458,3459,3460,3461,3462,3463,3464,3465,3466,3467
Seq#:147; N Pos. 3468,3469,3470,3471,3472,3473,3474,3475,3476,3477,3478
Seq#:147; N Pos. 3479,3480,3481,3482,3483,3484,3485,3486,3487,3488,3489
Seq#:147; N Pos. 3490,3491,3492,3493,3494,3495,3496,3497,3498,3499,3500
Seq#:147; N Pos. 3501,3502
Seq#:150; N Pos. 159,160,161,162,163,164,165,166,167,168,169,170,171,172
Seq#:150; N Pos. 173,174,175,176,177,178,179,180,181,182,183,184,185,186
Seq#:150; N Pos. 187,188,189,190,191,192,193,194,195,196,197,198,199,200
Seq#:150; N Pos. 201,202,203,204,205,206,207,208,209,210,211,212,213,214
Seq#:150; N Pos. 215,216,217,218,219,220,221,222,223,224,225,226,227,228
Seq#:150; N Pos. 229,230,231,232,233,234,235,236,237,238,239,240,241,242
Seq#:150; N Pos. 243,244,245,246,247,248,249,250,251,252,253,254,255,256
Seq#:150; N Pos. 257,258,259,260,261,262,263,264,265,266,267,268,269,270
Seq#:150; N Pos. 271,272
Seq#:152; N Pos. 77,97,371
Seq#:156; N Pos. 564,622,669,677,700
Seq#:159; N Pos. 1545,1608,1611,1615,1619,3504,3505,3506,3507,3508,3509
Seq#:159; N Pos. 3510,3511,3512,3513,3514,3515,3516,3517,3518,3519,3520
Seq#:159; N Pos. 3521,3522,3523,3524,3525,3526,3527,3528
Seq#:166; N Pos. 4653,4654,4655,4656,4657,4658,4659,4660,4661,4662,4663
Seq#:166; N Pos. 4664,4665,4666,4667,4668,4669,4670,4671,4672,4673,4674
Seq#:168; N Pos. 164,165,166,167,168,169,170,171,172,173,174,175,176,177
Seq#:168; N Pos. 178,179,180,181,182,183,184,185,186,187,188,189,190,191
Seq#:168; N Pos. 192,193,194,195,196,197,198,199,200,201,202,203,204,205
Seq#:168; N Pos. 206,207,208,209,210,211,212,213,214,215,216,217,218,219
Seq#:168; N Pos. 220,221,222,223,224,225,226,227
Seq#:169; N Pos. 37,62,66,351
Seq#:170; N Pos. 484
Seq#:171; N Pos. 2249,2262
Seq#:172; N Pos. 151,152
Seq#:185; N Pos. 2154
Seq#:188; N Pos. 217,218,219,220,221,222,223,224,225,226,227,228,229,230
Seq#:188; N Pos. 231,232,233,234,235,236,237,238,239,240,241,242,243,244
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/09/2002 PATENT APPLICATION: US/09/919,039 TIME: 11:51:54

```
Seq#:188; N Pos. 245,246,247,248,249,250,251,252,253,254,255,256,257,258
Seq#:188; N Pos. 259,260,261,262,263,264,265,266
Seg#:189; N Pos. 2365,2367,2368,2369,2370,2371,2372,2373,2374,2375,2376
Seq#:189; N Pos. 2377,2378,2379,2380,2381,2382,2383,2384,2385,2386,2387
Seq#:189; N Pos. 2388,2389,2390,2391,2392,2393,2394,2395,2396,2397,2398
Seq#:189; N Pos. 2399
Seq#:193; N Pos. 48
Seq#:198; N Pos. 4793,4798,4806,4809,4810,4815,4816,4824,4825,4828,4830
Seq#:198; N Pos. 4832,4833,4842,4843
Seq#:205; N Pos. 43
Seq#:210; N Pos. 26,32,892,908,918
Seq#:213; N Pos. 3017,3021
Seq#:215; N Pos. 3210,3211,3212,3213,3214,3215,3216,3217,3218,3219,3220
Seq#:215; N Pos. 3221,3222,3223,3224,3225,3226,3227,3228
Seg#:216; N Pos. 4929,4935,4940,4945,4974,4993
Seq#:223; N Pos. 4053,4054,4055,4056,4057,4058,4059,4060,4061,4062,4063
Seq#:223; N Pos. 4064,4065,4066,4067,4068,4069,4070,4071,4072,4073,4074
Seq#:223; N Pos. 4075,4076,4077,4078,4079,4080,4081,4082,4083,4084,4085
Seq#:223; N Pos. 4086,4087,4088,4089,4090,4091,4092,4093,4094,4095,4096
Seq#:223; N Pos. 4097,4098,4099,8362,8373,8382,8389,8399,8406,8407
Seq#:226; N Pos. 27,43
Seq#:229; N Pos. 1806,1807,1808,1809,1810,1811,1812,1813,1814,1815,1816
Seq#:229; N Pos. 1817,1818,1819,1820,1821,1822,1823,1824,1825,1826
Seq#:230; N Pos. 433,434,435,436,437,438,439,440,441,442,443,444,445,446
Seq#:230; N Pos. 447,448,449,450,451,452,453,454,455
Seq#:233; N Pos. 2249,2252,2255,2258,2261,2264,3470
Seg#:237; N Pos. 52,57
Seg#:238; N Pos. 231,241
Seg#:240; N Pos. 11
Seq#:246; N Pos. 46
Seq#:250; N Pos. 128,197,395,396,397,398,399,400,401,402,403,404,405,406
Seq#:250; N Pos. 407,408,409,410,411,412,413,414,415,416,417,418,419,420
Seq#:250; N Pos. 421,422,423,424,425,426,427,428,429,430,431,432,433,434
Seq#:250; N Pos. 435,436,437,438,439,440,441,442,443,444,445,446,447,448
Seq#:250; N Pos. 449,450,451,452,453,454,455,456,457,458,459,460,461,462
Seq#:250; N Pos. 463,464,465,466,467,468,469,470,471,472,473,474,475,476
Seq#:250; N Pos. 477,478,479,480,481,482,483,484,485,486,487,488,489,490
Seq#:250; N Pos. 491,492,493,494,495,496,497,498,499,500,501,502,503,504
Seq#:250; N Pos. 505,506,507,508,509,510,511,512,513,514,515,516,517,518
Seq#:250; N Pos. 519,520,521,522,523,524,525,526,527,528,529,530,531,532
Seq#:252; N Pos. 12,27,33,34,1070
Seq#:253; N Pos. 132
Seq#:254; N Pos. 3792,3796,3797,3798,3799,3800,3801
Seq#:255; N Pos. 69
Seg#:261; N Pos. 37
Seq#:262; N Pos. 748
Seq#:263; N Pos. 167,168,169,170,171,172,173,174,175,176,177,178,179,180
Seq#:263; N Pos. 181,182,183,184,185,186,187,188,189,190,191,192,193,194
Seq#:263; N Pos. 195,196,197,198,199,200,201,202,203,204,205,206,207,208
```

TIME: 11:51:54

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/919,039

```
Seq#:263; N Pos. 209,210,211,212,213,214,215,216,217,218,219,220,221,222
Seq#:263; N Pos. 223,224,225,226,227,228,229,230,231,232,233,234,235,236
Seq#:263; N Pos. 237,238,239,240,241,242,243,244,245,246,247,248,249,250
Seq#:263; N Pos. 251,252,253,254,255,256,257,258,259,260,261,262,263,264
Seq#:263; N Pos. 265,266,267,268,269,270,271,272,273,274,275,276,277,278
Seq#:263; N Pos. 279,280,281,282,283,284,285,286,287,288,289,290,291,292
Seq#:263; N Pos. 293,294,295,296,297,298,299,300,301,302,303,304,305,306
Seq#:263; N Pos. 307,308,309,310,311,312,313,314,315,316,317,318,319,320
Seq#:263; N Pos. 321,322,323,324,325,326,327,328,329,330,331,332
Seg#:266; N Pos. 1824
Seq#:267; N Pos. 847
Seq#:268; N Pos. 4850,4851,4852,4853,4854,4855,4856,4857,4858,4859,4860
Seq#:268; N Pos. 4861,4862,4863,4864,4865,4866,4867,4868,4869,4870,4871
Seq#:268; N Pos. 4872,4873,4874,4875,4876,4877,4878,4879,4880,4881,4882
Seq#:268; N Pos. 4883,4884,4885,4886,4887,4888,4889,4890,4891,4892,4893
Seq#:268; N Pos. 4894,4895,4896,4897,4898,4899,4900,4901,4902,4903,4904
Seq#:268; N Pos. 4905,4906,4907,4908,4909,4910,4911,4912,4913,4914,4915
Seq#:268; N Pos. 4916,4917,4918,4919,4920,4921,4922,4923,4924,4925,4926
Seq#:268; N Pos. 4927,4928,4929,4930,4931,4932,4933,4934,4935,4936,4937
Seq#:268; N Pos. 4938,4939,4940,4941,4942,4943,4944,4945,4946,4947,4948
Seq#:268; N Pos. 4949,4950,4951,4952,4953,4954,4955,4956,4957,4958,4959
Seq#:268; N Pos. 4960,4961,4962,4963,4964,4965,4966,4967,4968,4969,4970
Seq#:268; N Pos. 4971,4972,4973,4974,4975,4976,4977,4978,4979,4980,4981
Seq#:268; N Pos. 4982,4983,4984,4985,4986,4987,4988,4989,4990,4991,4992
Seq#:268; N Pos. 4993,4994,4995,4996,4997,4998,4999,5000,5001,5002,5003
Seq#:268; N Pos. 5004,5005,5006,5007,5008,5009,5010,5011,5012,5013,5014
Seq#:268; N Pos. 5015,5016,5017,5018,5019,5020,5021,5022,5023,5024,5025
Seq#:268; N Pos. 5026,5027,5028,5029,5030,5031,5032,5033,5034,5035,5036
Seq#:268; N Pos. 5037,5038,5039,5040,5041,5042,5043,5044,5045,5046,5047
Seq#:268; N Pos. 5048,5049,5050,5051,5052,5053,5054,5055,5056,5057,5058
Seq#:268; N Pos. 5059,5060,5061,5062,5063,5064,5065,5066,5067,5068,5069
Seq#:268; N Pos. 5070,5071,5072,5073,5074,5075,5076,5077,5078,5079,5080
Seq#:268; N Pos. 5081,5082,5083,5084,5085,5086,5087,5088,5089,5090,5091
Seq#:268; N Pos. 5092,5093,5094,5095,5096,5097,5098,5099,5100,5101,5102
Seq#:268; N Pos. 5103,5104,5105,5106,5107,5108,5109,5110,5111,5112,5113
Seq#:268; N Pos. 5114,5115,5116,5117,5118,5119,5120,5121,5122,5123,5124
Seq#:268; N Pos. 5125,5126,5127,5128,5129,5130,5131,5132,5133,5134,5135
Seq#:268; N Pos. 5136,5137,5138,5139,5140,5141,5142,5143,5144,5145,5146
Seq#:268; N Pos. 5147,5148,5149,5150,5151,5152,5153,5154,5155,5156,5157
Seq#:268; N Pos. 5158,5159,5160,5161,5162,5163
Seg#:273; N Pos. 935,943,945,947,951
Seg#:274; N Pos. 3130
Seq#:276; N Pos. 1508,3344,3345,3346,3348,3365,3368,3371,3372
Seq#:280; N Pos. 1586
Seq#:281; N Pos. 17,22,44,80,103,120,124,129,141,148,171,215,235,268,300
Seg#:281; N Pos. 552
Seq#:282; N Pos. 269,271,273
Seq#:286; N Pos. 322,323,324,325,326,327,328,329,330,331,332,333,334,335
Seq#:286; N Pos. 336,337,338,339
```

TIME: 11:51:54

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/919,039

```
Seq#:287; N Pos. 271,283
Seq#:288; N Pos. 10422,10423,10424,10425,10426,10427,10428,10429,10430
Seq#:288; N Pos. 10431,10432,10433,10434,10435,10436,10437,10438,10439
Seq#:288; N Pos. 10440,10441,10442,10443,10444,10445,10446,10447,10448
Seq#:288; N Pos. 10449,10450,10451,10452,10453,10454,10455,10456,10457
Seq#:288; N Pos. 10458,10459,10460,10461,10462,10463,10464
Seq#:293; N Pos. 31,1622,1987,1988,1989,1990,1991,1992,1993,1994,1995,1996
Seq#:293; N Pos. 1997,1998,1999,2000,2001,2002,2003,2004,2005,2006,2007
Seq#:293; N Pos. 2008,2009,2010,2011,2012,2013,2014,2015,2016,2017,2018
Seq#:293; N Pos. 2019,2020,2021,2022,2023,2024,2025,2026,2027,2028,2029
Seq#:293; N Pos. 2030,2031,2032,2033,2034,2035,2036,2037,2038,2039,2040
Seq#:293; N Pos. 2041,2042,2043,2044,2045,2046,2047,2048,2049,2050,2051
Seq#:293; N Pos. 2052,2053,2054,2055,2056,2057,2058,2059,2060,2061,2062
Seq#:293; N Pos. 2063,2064,2065,2066,2067,2068,2069,2070,2071,2072,2073
Seq#:293; N Pos. 2074,2075,2076,2077,2078,2079,2080,2081,2082,2083,2084
Seq#:293; N Pos. 2085,2086,2087,2088,2089,2090,2091,2092,2093,2094,2095
Seq#:293; N Pos. 2096,2097,2098,2099,2100,2101,2102,2103,2104,2105,2106
Seq#:293; N Pos. 2107,2108,2109,2110,2111,2112,2113,2114,2115,2116,2117
Seq#:293; N Pos. 2118,2119,2120,2121,2122,2123,2124,2125,2126,2127,2128
Seq#:293; N Pos. 2129,2130,2131,2132,2133,2134,2135,2136,2137,2138,2139
Seq#:293; N Pos. 2140,2141,2142,2143,2144,2145,2146,2147,2148,2149,2150
Seq#:293; N Pos. 2151,2152,2153,2154,2155,2156,2157,2158,2159,2160,2161
Seq#:293; N Pos. 2162,2163,2164,2165,2166,2167,2168,2169,2170,2171,2172
Seq#:293; N Pos. 2173,2174,2175,2176,2177,2178,2179,2180,2181,2182,2183
Seq#:293; N Pos. 2184,2185,2186,2187,2188,2189,2190,2191,2192,2193,2194
Seq#:293; N Pos. 2195,2196,2197,2198,2199,2200,2201,2202,2203,2204,2205
Seq#:293; N Pos. 2206,2207,2208,2209,2210,2211,2212,2213,2214,2215,2216
Seq#:293; N Pos. 2217,2218,2219,2220,2221,2222,2223,2224,2225,2226,2227
Seq#:293; N Pos. 2228,2229,2230,2231,2232,2233,2234,2235,2236,2237,2238
Seq#:293; N Pos. 2239,2240,2241,2242,2243,2244,2245,2246,2247,2248,2249
Seq#:293; N Pos. 2250,2251,2252,2253,2254,2255,2256,2257,2258,2259,2260
Seq#:293; N Pos. 2261,2262,2263,2264,2265,2266,2267,2268,2269,2270,2271
Seq#:293; N Pos. 2272,2273,2274,2275,2276,2277,2278,2279
Seq#:294; N Pos. 1924,2298,2310
Seq#:302; N Pos. 422
Seg#:315; N Pos. 119,126
Seq#:316; N Pos. 524,525,526,527,528,529,530,531,532,533,534,535,536,537
Seq#:316; N Pos. 538
Seq#:325; N Pos. 1733,2736,2816
Seq#:326; N Pos. 740,746,819
Seq#:334; N Pos. 1730,1747,1751,1763,1769,1771,1772,1778
Seg#:339; N Pos. 18
Seg#:340; N Pos. 3013,4582
Seq#:346; N Pos. 311,324,353,382,389
Seq#:349; N Pos. 844,847
Seq#:351; N Pos. 2577
Seq#:353; N Pos. 666
Seq#:354; N Pos. 198
Seq#:355; N Pos. 524
```

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/919,039

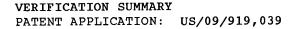
DATE: 09/09/2002 TIME: 11:51:54

```
Seq#:356; N Pos. 374,491
Seq#:361; N Pos. 29,208,234,241,244,257,279,297,307,308,310,327,330,332
Seq#:365; N Pos. 51,79,135,141,178,181,182,184,185,212,299,332,359,361
Seq#:371; N Pos. 1524
Seq#:379; N Pos. 236,237,238,239,240,241,242,243,244,245,246,247,248,249
Seq#:379; N Pos. 250,251,252,253,254,255,256,257,258,259,260,261,262,263
Seq#:379; N Pos. 264,265,266,267,268,269,270,271,272,273,274,275,276,277
Seq#:379; N Pos. 278,279,280,281,282,283,284,285,286,287,288,289,290,291
Seq#:379; N Pos. 292,293,294,295,296,297,298,299,300,301,302,303,304,305
Seq#:379; N Pos. 306,307,308,309,310,311,312,313,314,315,316,317,318,319
Seq#:379; N Pos. 320,321,322,323,324,325,326,327,328,329,330,331,332,333
Seq#:379; N Pos. 334,335,336,337,338,339,340,341,342,343,344,345,346,347
Seq#:379; N Pos. 348,349,350,351,352,353,354,355,356,357,358,359,360,361
Seq#:379; N Pos. 362,363,364,365,366,367,368,369,370,371,372,373,374,375
Seq#:379; N Pos. 376,377,378,379,380,381,382,383,384,385,386,387,388,389
Seq#:379; N Pos. 390,391,392,393,394,395,396,397,398,399,400,401,402,403
Seq#:379; N Pos. 404,405,406,407,408,409,410,411,412,413,414,415,416,417
Seq#:379; N Pos. 418,419,420,421,422,423,424,425,426,427,428,429,430,431
Seq#:379; N Pos. 432,433,434,435,436,437,438,439,440,441,442,443,444,445
Seq#:379; N Pos. 446,447,448,449,450,451,452,453,454,455,456,457,458,459
Seq#:379; N Pos. 460,461,462,463,464,465,466,467,468,469,470,471,472,473
Seq#:379; N Pos. 474,475,476,477,478,479,480,481,482,483,484,485,486,487
Seq#:379; N Pos. 488,489,490,491,492,493,494,495,496,497,498,499,500,501
Seq#:379; N Pos. 502,503,504,505,506,507,508,509,510,511,512,513,514,515
Seq#:379; N Pos. 516,517,518,519,520,521,522,523,524,525,526,527,528,529
Seq#:379; N Pos. 530,531,532,533,534,535,536,537,538,539,540,541,542,543
Seq#:379; N Pos. 544,545,546,547,548,549,550,551,552,553,554,555,556,557
Seq#:379; N Pos. 558,559,560,561,562,563,564,565,566,567,568,569,570,571
Seq#:379; N Pos. 572,573,574,575,576,577,578,579,580,581,582,583,584,585
Seg#:379; N Pos. 586,587,588,589,590
Seq#:380; N Pos. 2358,2359,2360,2361,2362,2363,2364,2365,2366,2367,2368
Seq#:380; N Pos. 2369,2370,2371,2372,2373,2374,2375,2376,2377,2378,2379
Seq#:380; N Pos. 2380,2381,2382,2383,2384,2385,2386,2387,2388,2389,2390
Seq#:380; N Pos. 2391,2392,2393,2394,2395,2396,2397,2398,2399,2400,2401
Seq#:380; N Pos. 2402,2403,2404,2405,2406,2407,2408,2409,2410,2411,2412
Seq#:380; N Pos. 2413,2414,2415,2416,2417,2418,2419,2420,2421,2422,2423
Seq#:380; N Pos. 2424,2425,2426,2427,2428,2429,2430,2431,2432,2433,2434
Seq#:380; N Pos. 2435,2436,2437,2438,2439,2440,2441,2442,2443,2444,2445
Seq#:380; N Pos. 2446,2447,2522,2523,2524,2525,2526,2527,2528,2529,2530
Seq#:380; N Pos. 2531,2532,2533,2534,2535,2536,2537,2538,2539,2540,2541
Seq#:380; N Pos. 2542,2543,2544,2545,2546,2547,2548,2549,2550,2551,2552
Seq#:380; N Pos. 2553,2554,2555,2556,2557,2558,2559,2560,2561,2562,2563
Seq#:380; N Pos. 2564,2565,2566,2567,2568,2569,2570,2571,2572,2573,2574
Seq#:380; N Pos. 2575,2576,2577,2578,2579,2580,2581,2582,2583,2584,2585
Seq#:380; N Pos. 2586,2587,2588,2589,2590,2591,2592,2593,2594,2595,2596
Seq#:380; N Pos. 2597,2598,2599,2600,2601,2602,2603,2604,2605,2606,2607
Seq#:380; N Pos. 2608,2609,2610,2611,2612,2613,2614,2615,2616,2617,2618
Seg#:380; N Pos. 2619,2620,2621,2622,2623,2624,2625,2626,2627,2628,2629
Seq#:380; N Pos. 2630,2631,2632,2633,2634,2635,2636,2637,2638,2639,2640
```

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/919,039

DATE: 09/09/2002 TIME: 11:51:54

```
Seq#:380; N Pos. 2641,2642,2643,2644,2645,2646,2647,2648,2649,2650,2651
Seq#:380; N Pos. 2652,2653,2654,2655,2656,2657,2658,2659,2660,2661,2662
Seq#:380; N Pos. 2663,2664,2665,2666,2667,2668,2669,2670,2671,2672,2673
Seq#:380; N Pos. 2674,2675,2676,2677,2678,2679,2680,2681,2682,2683,2684
Seq#:380; N Pos. 2685,2686,2687,2688,2689,2690,2691,2692,2693,2694,2695
Seq#:380; N Pos. 2696,2697,2698,2699,2700,2701,2702,2703,2704,2705,2706
Seq#:380; N Pos. 2707,2708,2709,2710,2711,2712,2713,2714,2715,2716,2717
Seq#:380; N Pos. 2718,2719,2720,2721,2722,2723,2724,2725,2726,2727,2728
Seq#:380; N Pos. 2729,2730,2731,2732,2733,2734,2735,2736,2737,2738,2739
Seq#:380; N Pos. 2740,2741,2742,2743,2744,2745,2746,2747,2748,2749,2750
Seq#:380; N Pos. 2751,2752,2753,2754,2755,2756,2757,2758,2759,2760,2761
Seq#:380; N Pos. 2762,2763,2764,2765,2766,2767,2768,2769,2770,2771,2772
Seq#:380; N Pos. 2773,2774,2775,2776,2777,2778,2779,2780,2781,2782,2783
Seq#:380; N Pos. 2784,2785,2786,2787,2788,2789,2790,2791,2792,2793,2794
Seq#:380; N Pos. 2795,2796,2797,2798,2799,2800,2801,2802,2803,2804,2805
Seq#:380; N Pos. 2806,2807,2808,2809,2810,2811,2812,2813,2814,2815,2816
Seq#:380; N Pos. 2817,2818,2819,2820,2821,2822,2823,2824,2825,2826,2827
Seq#:380; N Pos. 2828,2829,2830,2831,2832,2833,2834,2835,2836,2837,2838
Seq#:380; N Pos. 2839,2840,2841,2842,2843
Seg#:383; N Pos. 850
Seq#:385; N Pos. 847,856
Seq#:386; N Pos. 1841,1842,1843,1844,1845,1846,1847,1848,1849,1850,1851
Seq#:386; N Pos. 1852,1853,1854,1855,1856,1857,1858,1859,1860,1861,1862
Seq#:386; N Pos. 1863,1864,1865,1866,1867,1868,1869,1870,1871,1872,1873
Seq#:386; N Pos. 1874,1875,1876,1877,1878,1879,1880,1881,1882,1883,1884
Seq#:386; N Pos. 1885,1886,1887,1888,1889,1890,1891,1892,1893,1894,1895
Seq#:386; N Pos. 1896,1897,1898,1899,1900,1901,1902,1903,1904,1905,1906
Seq#:386; N Pos. 1907,1908,1909,1910,1911,1912,1913,1914,1915,1916,1917
Seq#:386; N Pos. 1918,1919,1920,1921,1922,1923,1924,1925,1926,1927,1928
Seq#:386; N Pos. 1929,1930,1931,1932,1933,1934,1935,1936,1937,1938,1939
Seq#:386; N Pos. 1940,1941,1942,1943,1944,1945,1946,1947,1948,1949,1950
Seq#:386; N Pos. 1951,1952,1953,1954,1955,1956,1957,1958,1959,1960,1961
Seq#:386; N Pos. 1962,1963,1964,1965,1966,1967,1968,1969,1970,1971,1972
Seq#:386; N Pos. 1973,1974,1975,1976,1977,1978,1979,1980,1981,1982,1983
Seq#:386; N Pos. 1984,1985,1986,1987,1988,1989,1990,1991,1992,1993,1994
Seq#:386; N Pos. 1995,1996,1997,1998,1999,2000,2001,2002,2003,2004,2005
Seg#:386; N Pos. 2006,2007,2008,2009,2010
Seg#:392; N Pos. 174
Seq#:396; N Pos. 525
Seq#:398; N Pos. 540,541,542,543,544,545,546,547,548,549,550,551,552,553
Seq#:398; N Pos. 554,555,556,557,558,559,560,561,562,563,564,565,566,567
Seq#:398; N Pos. 568,569,570,571,572,573,574,575,576,577,578,579,580,581
Seq#:398; N Pos. 582,583,584,585,586,587,588,589,590,591,592,593,594,595
Seq#:398; N Pos. 596,597,598,599,600,601,602,603,604,605,606,607,608,609
Seq#:398; N Pos. 610,611,612,613,614,615,616,617,618,619,620,621,622,623
Seq#:398; N Pos. 624,625,626,627,628,629,630,631,632,633,634,635,636,637
Seq#:398; N Pos. 638,639,640,641,642,643,644,645,646,647,648,649,650,651
Seq#:398; N Pos. 652,653,654,655,656,657,658,659,660,661,662,663,664,665
Seg#:398; N Pos. 666,667,668
```



DATE: 09/09/2002 TIME: 11:51:54

Input Set : A:\pa0035us_seqlisting.txt
Output Set: N:\CRF4\09092002\I919039.raw

```
L:9 M:270 C: Current Application Number differs, Replaced Current Application Number
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:54 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:75 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:77 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:120
L:103 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:480
L:104 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:540
L:2001 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:3720
L:2002 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:3780
L:2003 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:3840
L:2004 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:3900
L:2528 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:2536 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:480
L:3210 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:900
L:3475 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:0
L:3628 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:540
L:3629 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:600
L:3630 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:660
L:3631 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:720
L:3632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:780
L:3653 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:0
L:3655 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:120
L:3929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60 after pos.:2820
L:4437 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:4500
L:4438 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:4560
L:4447 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:5100
L:4733 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74 after pos.:3780
L:5157 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80 after pos.:300
L:5158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80 after pos.:360
L:5200 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:0
L:5201 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:60
L:5202 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:120
L:5203 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:180
L:5204 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:240
L:5214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:840
L:5215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:900
L:5405 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:0
L:5411 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:360
L:5423 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1080
L:5424 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1140
L:5425 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1200
L:5426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1260
L:5427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1320
L:5428 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1380
L:5459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:480
L:5460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:540
L:5461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:600
```

L:5463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:720

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/919,039

DATE: 09/09/2002

TIME: 11:51:54

Input Set : A:\pa0035us_seqlisting.txt
Output Set: N:\CRF4\09092002\I919039.raw

L:5464 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:780 L:5465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:840 L:5466 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:900 L:5467 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:960

STATISTICS SUMMARY

PATENT APPLICATION: US/09/919,039

DATE: 09/09/2002 TIME: 11:51:54

Input Set : A:\pa0035us_seqlisting.txt
Output Set: N:\CRF4\09092002\I919039.raw

Application Serial Number: US/09/919,039

Alpha or Numeric or Xml: Numeric

Application Class:

Application File Date: 09-09-2002

Art Unit:

Software Application: OTHER Total Number of Sequences: 401 Total Nucleotides: 631045

Total Amino Acids: 45543 Number of Errors: 0 Number of Warnings: 233

Number of Corrections: 2

MESSAGE SUMMARY

270 C: 1 (Current Application Number differs)

271 C: 1 (Current Filing Date differs)
341 W: 233 ((46) "n" or "Xaa" used)